

54.4; Tatoosh Island, 55.0; Port Angeles, 55.1; Eureka, 55.8; Fort Canby, 57.8. In Canada, Banff, 52.6; Esquimault, 56.5; St. Johns, N. F., 56.8; Calgary, 57.5; Father Point, 57.7; Edmonton, 58.1.

As compared with the normal for July, the mean temperature for the current month was in excess slightly on the California coast, but decidedly throughout the Mississippi watershed, Lake Region, northern New England, and the Maritime Provinces. It was decidedly deficient over the Rocky Mountain Plateau Region and slightly on the New England Coast. It was the coldest on record for the eastern portions of Washington and Oregon.

The greatest excesses were: In the United States, Sault Ste. Marie, 5.5; Buffalo, 4.7; Northfield, 4.5; Milwaukee, 3.8; Alpena, 3.7; Green Bay, 3.5; Topeka, 3.4. In Canada, White River, 6.5; Parry Sound, 5.6; Saugeen, 5.4; Rockcliffe, 4.6. The deficits were: In the United States, Walla Walla, 4.6; Baker City, 4.4; Lander, 4.3; El Paso, 3.7; Salt Lake City, 3.6. In Canada, St. Johns, N. F., 4.2; Esquimault, 3.5; Battleford, 2.9; Edmonton and Medicine Hat, 2.8.

Considered by districts the mean temperatures of the current month show departures from the normal as given in Table I. The greatest positive departures were: Lower Lake, 2.2; Upper Lake, 3.0; Missouri Valley, 1.5. The greatest negative departures were: Southern Plateau, 2.4; Northern Plateau, 3.6.

In Canada, Prof. R. F. Stupart says:

Temperature was a little below average in British Columbia and the Northwest Territories; it was from 0° to 4° above in Manitoba, and from 3° to 7° above in the Province of Ontario. In Quebec, between Montreal and Quebec City, it was 4° above, and thence the difference diminished to about 1° above at Gaspé. In New Brunswick and Nova Scotia there was a general excess ranging between 1° and 3°.

The years of highest and lowest mean temperatures for July are shown in Table I of the REVIEW for July, 1894. The mean temperature for the current month was the highest on record at: Palestine, 84.4; Parkersburg, 76.5; Milwaukee, 73.2; Alpena, 69.0; Sault Ste. Marie, 67.6. It was the lowest on record at: Baker City, 62.2; Spokane, 65.2; Winnemucca, 68.1; Walla Walla, 70.6; Salt Lake City, 71.9.

The maximum and minimum temperatures of the current month are given in Table I. The highest maxima were: 112, Yuma (10th); 110, Fresno (11th); 107, Phoenix (30th); 106, Red Bluff (13th); 105, Walla Walla and Sacramento (11th), Abilene (26th). The lowest maxima were: 62, Tatoosh Island (13th); 67, Eureka (18th), Port Angeles (9th); 69, Fort Canby (13th); 74, Astoria (10th), 78, Block Island and Woods Hole (16th). The highest minima were: 74, Port Eads (frequently); 72, Corpus Christi (14th); 71, New Orleans (17th), Charleston (14th); 70, Key West (7th), Tampa (17th), Galveston (27th). The lowest minima were: 34, Idaho Falls (19th); 35, Winnemucca (8th); 37, Baker City (7th); 39, Carson City (8th); 40, Cheyenne (frequently); 41, Lander 18th.

The years of highest maximum and lowest minimum temperatures for July are given in the last four columns of Table I of the REVIEW for July, 1896. During the current month the maximum temperatures were equal to or above the highest on record at: Kansas City, 102; Sandusky, 100; Rochester and Parkersburg, 99; Alpena, 98; Cleveland, 97; Northfield and Buffalo, 95; Erie, 94; Grand Haven, 93. The minimum temperatures were equal to or below the lowest on record at: Winnemucca, 35; Santa Fe and Pueblo, 43; San Francisco, 47; Abilene, 61.

The greatest daily range of temperature and the data for computing the extreme and mean monthly ranges are given for each of the regular Weather Bureau stations in Table I. The largest values of the greatest daily ranges were: Fresno, 52; Idaho Falls, 50; Havre and Pueblo, 45; Cheyenne, 44; Walla

Walla, Winnemucca, and Carson City, 43. The smallest values were: Tatoosh Island and Hatteras, 11; Key West, 13; Port Eads, San Diego, and Fort Canby, 15; Nantucket, 16.

Among the extreme monthly ranges the largest were: Idaho Falls, 62; Winnemucca, 61; Pueblo and Fresno, 58; Baker City, 56; Walla Walla and Miles City, 55. The smallest values were: Tatoosh Island, 14; Port Eads, 19; Fort Canby, San Diego, and Hatteras, 20; Key West and Eureka, 21.

Accumulated monthly departures from normal temperatures from January 1 to the end of the current month are given in the second column of the following table, and the average departures are given in the third column, for comparison with the departures of current conditions of vegetation from the normal condition.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Total.	Average.		Total.	Average.
New England .....	0	0	Ohio Valley and Tenn...	-1.1	-0.2
Middle Atlantic .....	+3.7	+0.5	North Dakota .....	-5.0	-0.7
South Atlantic .....	+0.7	+0.1	Northern Slope .....	-2.1	-0.3
Florida Peninsula .....	+0.7	+0.1	Southern Slope .....	-0.2	-0.0
East Gulf .....	+0.1	0.0	Southern Plateau .....	-6.1	-0.9
West Gulf .....	+1.9	+0.3	Middle Plateau .....	-8.0	-1.1
Lower Lake .....	+6.2	+0.9	North Pacific .....	-1.2	-0.2
Upper Lake .....	+3.6	+0.5	Middle Pacific .....	-1.6	-0.2
Missouri Valley .....	+9.2	+1.3	South Pacific .....	-4.1	-0.6
Upper Mississippi Valley ..	+2.6	+0.4			
Missouri Valley .....	+2.1	+0.3			
Middle Slope .....	+2.9	+0.4			
Northern Plateau .....	+5.4	+0.8			

### MOISTURE.

The quantity of moisture in the atmosphere at any time may be expressed by the weight of the vapor coexisting with the air contained in a cubic foot of space, or by the tension or pressure of the vapor, or by the temperature of the dew-point. The mean dew-point for each station of the Weather Bureau, as deduced from observations made at 8 a. m. and 8 p. m., daily, is given in Table I.

The rate of evaporation from a special surface of water on muslin at any moment determines the temperature of the wet-bulb thermometer. The mean wet-bulb temperature is now published in Table I; it is always intermediate, and generally about half way between the temperature of the air and of the dew-point. The quantity of water evaporated in a unit of time from the muslin surface may be considered as depending essentially upon the wet-bulb temperature, the dew-point, and the wind.

The relative humidity, or the ratio between the moisture that is present in the air and the moisture that it would contain if saturated at its observed temperature is given in Table I as deduced from the 8 a. m. and 8 p. m. observations. The general average for a whole day, or any other interval, would properly be obtained from the data given by an evaporimeter, but may also be obtained, approximately, from frequent observations of the relative humidity.

### PRECIPITATION.

[In inches and hundredths.]

The distribution of precipitation for the current month, as determined by reports from about 2,500 stations, is exhibited on Chart III. The numerical details are given in Tables I, II, and III. The total precipitation for the current month was largest, exceeding 19 inches in central and western Connecticut, and exceeding 6 inches over the greater part of New England and the Middle Atlantic coast region. It was also unusually large in Wisconsin and the Florida Peninsula. Little or no rain fell in Oregon, California, southern Idaho, Nevada, Utah, parts of Arizona and New Mexico.